

Fixture Selection and Installation Guide

Air Operation for:

- assembly applications
- light holding pressure applications
- quick cycle requirements
- clean environment

Hydraulic Operation for:

- metal cutting
- high torque requirements
- consistent holding
- heavy chip & coolant conditions
- crimping



Light and heavy duty collet fixtures are designed for your production and tool room environments. Housings are made of cast iron. Steel clamp pistons are hardened and ground to insure lasting quality. Seals and "O" rings are selected for industrial quality standards.

Air/Hydraulic fixtures develop their holding power from line pressure applied against the piston area. For calculating the holding force use the following formula:

$$\text{Clamping pressure} = \frac{\text{Line Pressure} \times \text{Piston Area}}{2} \times \text{Cotangent of the Collet Angle.}$$

$$\begin{aligned} \text{Applied Force} &= \text{Piston Area} \times \text{Operating Pressure} \\ \text{Holding Force} &= \text{Force} / 2 \times \text{Cotan} < \times .7 \end{aligned}$$

Recommended Installation:

- 1.) Grind sub mounting plate on top and bottom
- 2.) Bore pilot hole for fixture boss
- 3.) Add locating holes, diameter and/or surfaces
- 4.) Mount fixture to sub-plate
- 5.) Install pressure lines to proper ports
- 6.) Attach coolant lines if required
- 7.) Adjust collet (tighten collet against part while fixture is in unclamped position. Back off collet 1 1/2 turns)
- 8.) Lock collet in plate (side lock screw or collet backup plug)

